

Stormwater Management Streamside Landowners Best Management Practices (BMPs)



We are lucky to live in one of the most wildlife-rich places in the world.. By ensuring that streamside activities have beneficial impacts instead of harmful impacts, and that they enhance habitat-forming natural processes instead of stopping them, you can improve stream health and wildlife habitat for generations to come.

The most important things you can do to create good wildlife habitat are also the most important things you can do for your stream:

- I. **Leave Your Streambanks Natural:** Healthy streams are bordered by native trees and shrubs, and are crossed with fallen logs and roots that catch and hold sediment, leaves, and debris. It may look untidy, but such natural clutter is essential to the health of rivers and streams. Trees, shrubs, and roots, stabilize streambanks and reduce erosion. Logs and branches in streams slow water velocity and protect streambanks and streamside plants from being swept away in high winter flows. Fallen trees help create gravel bars where salmon and trout spawn.
- II. **Plant Native Plants:** Native plants are suited to our local climate and soils so they don't require watering, fertilizer, or pesticides. Native plants are hosts for many species of beneficial insects that serve as pollinators, food for salmon, trout and birds, and predators of harmful insects. They also provide seeds and fruit for birds. Salmon depend on native plants for shade, shelter (young salmon hide in overhanging shrubs at all times of the year), food (the mayflies, stoneflies, and caddisflies that salmon eat all need native plants), and leaf litter.
- III. **Plant Trees:** Shrubs, especially native shrubs, are very good for streams. Trees, however, provide many services that shrubs and smaller plants cannot. Living trees provide shade that keeps water cool. They provide food such as beneficial insects. They also provide leaves, needles, twigs and branches for the insects, amphibians and fish that live in the streams. Dead and fallen trees provide habitat for insects, amphibians and fish. They create pools that control sediment and nutrient movement. They slow the flow of water, reducing erosion and property damage.



IV. **Limit Use of Lawn Chemicals:** Most lawn chemicals can harm your stream.

- **Pesticides** designed to kill terrestrial insects can also kill aquatic insects such as the mayflies, caddisflies and stoneflies that salmon and trout rely on for food. They can also kill important predatory insects like dragonfly and damselfly larvae, aquatic beetles, and water striders. These insects help control mosquitoes, blackflies, and other pests.
- **Herbicides** designed to kill weeds can also kill aquatic vegetation, cutting off the food supply for the entire aquatic food chain. The nitrogen and phosphorus in fertilizers, livestock waste, and pet waste are like vitamins. People need vitamins to live, but too much of some vitamins is toxic. Likewise, streams need phosphorus and nitrogen, but too much can cause severe problems. High nitrogen levels in water are also toxic to fish. Phosphorus is a major problem in many Snohomish County lakes.
- **Fertilizers** dissolve in rainwater and wash into the soil. Some, but not all, of the fertilizer is absorbed and used by plants. The rest eventually migrates into streams, where it causes algae blooms. Algae blooms not only look bad, they consume dissolved oxygen in the water – oxygen that fish and other aquatic wildlife need to breathe. Cold-water fish species like salmon and trout require high oxygen levels.

V. **Keep Pets out of Streams:** Pets and livestock are hard on streams. They damage streamside vegetation, cause erosion, and trample salmon eggs. They disrupt spawning salmon, disturb wildlife, and harass juvenile fish. Like fertilizer, pet waste can cause severe nitrogen, phosphorus, and bacterial problems.

VI. **Don't Dump Debris** A natural, healthy shoreline includes plants, trees, and shrubs that shed leaves and other vegetative debris along the water's edge. But too much of a good thing is not good for the water. Grass clippings, leaf piles, and excess soil piles all pose a threat to healthy water. Keep those landscape debris polluters out of the waterways by using mulch piles away from the water's edge or bagging for landscape waste pickup.

CITY OF EDMONDS



PUGET SOUND

